

# ABSTRACT OF THE DISCLOSURE

In a multi-cylinder engine having a compression ignition combustion mode, a vibration detecting sensor that is preferably mounted in a cylinder block or a cylinder head is used to detect a frequency and the detected frequency is appropriately analyzed to detect or estimate a cylinder pressure peak value and peak timing for each cylinder. An amount of internal EGR, a fuel injection condition, an engine speed and the like are then controlled so as to bring each of these parameters into an appropriate range thereof. The control apparatus suppresses variations in combustion states among different cylinders and different cycles arising from unit-to-unit variations or deterioration in the engine or part-to-part variations or deterioration in a component thereof.